Case Reports

Single pleural nodule in the minor fissure: an unusual manifestation of tuberculosis

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Introduction

Tuberculosis is relatively common in some areas of the world and it remains an important cause of morbidity and mortality (1). The lungs, mediastinum, pleura, abdomen and the spine are the main sites which are commonly involved in this disease (2-5).

The pleural involvement may manifest itself as pleural effusion or empyema (6). Although multiple pleural nodules has been described in literature (7), to the best of the authors’ knowledge, the single pleural nodule in the minor fissure has not yet been described as a cause of tuberculosis. Hereby a case of tuberculosis with this unusual manifestation of tuberculosis is presented.

Case History

In April 1995, a 32-year-old villager woman referred to the authors’ hospital complaining of fever, weight loss and night sweats of 40 days duration. She had been well until 3 months earlier, when she developed a non-productive cough which lasted for 20 days. Then she started having fever, night sweats, anorexia and weight loss. Her symptoms got worse over the next 3 weeks, hence she sought medical attention. On admission to the authors’ hospital her physical examination was normal except for a body temperature of 38.4°C. Her chest X-ray films revealed a pleural nodule in the minor fissure associated with pleural thickening (Plate 1) with no other abnormalities. Microscopic examination of sputum showed no fungi or acid-fast bacilli. Cultures of the blood and sputum were negative. Laboratory tests included a haemoglobin of 10.8 g dl⁻¹ and erythrocyte sedimentation rate of 66 mm h⁻¹. Skin test with intermediate-strength purified protein derivative of tuberculin (PPD) was positive (18 mm). Examination by fibre-optic bronchoscopy was normal. Cytological examination of bronchial brushing and washing revealed no malignant cells. Examination of especially stained specimens for acid-fast bacilli, fungi and bacteria were negative.

Transthoracically, a fine-needle aspiration of the pleural nodule was done. No specific pathogen was found, and its acid-fast stain was also negative. Five days after admission, she left hospital despite medical advice. Twenty days later, she returned with a high-grade fever and dyspnoea. Her temperature was 39.8°C orally and there was rales in the upper region of the right lung. Arterial blood gas (on room air) revealed: pH 7.45, PaCO₂ 28 mmHg, and PaO₂ 60 mmHg. A chest X-ray film demonstrated alveolar infiltrations in the right upper lobe with multiple cavities (Plate 2). Microscopic examination of sputum was strongly positive for acid-fast bacilli. Anti-tuberculous chemotherapy was started. The patient responded well and she became afebrile 3 weeks later. The last sputum culture obtained during her second admission was reported to be positive for Mycobacterium tuberculosis about 6 weeks later. She was discharged in good health and has had no symptoms in her subsequent outpatient check-ups over the following 6 months.

Discussion

Tuberculosis of the pleura usually manifests itself as pleural effusion in the forms of hydrothorax, hemothorax, pneumothorax or chylothorax (8-10). Pleural calcification or pleural thickening (11) are the usual late manifestations of tuberculosis. These pleural changes may be associated with other abnormalities in the lungs which could be helpful for the correct diagnosis.

Although multiple pleural nodules and multiple lobulated dense shadows similar to mesotheliomas have been reported as unusual manifestations of pleural tuberculosis (7,12), the present case is the first to be reported with a single pleural nodule in the minor fissure.

The differential diagnosis in the present patient included loculated emphyema, malignancy and tuberculosis because of a positive tuberculin skin test. All work ups, however, were negative until her subsequent referral, when her typical chest X-ray findings and sputum examination made the diagnosis of tuberculosis feasible.

In conclusion, single pleural nodule may be caused by the tuberculosis, especially when it is associated with appropriate signs and symptoms.
PLATE 1. Chest X-ray films show a pleural nodule associated with pleural thickening in the minor fissure.

PLATE 2. Typical upper lobe infiltration with cavitation of tuberculosis is seen in this chest X-ray film.

References


